

PATENT APPLICATION

for:

"Method and apparatus for the laser cutting of
stainless steel, coated steel, aluminum or aluminum
alloys with a bifocal optical component"

in the name of:

L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET
L'EXPLOITATION DES PROCEDES GEORGES CLAUDE

Inventors: Christophe BERTEZ,
Jean HAMY and
Olivier MATILE

ABSTRACT

Method and apparatus for cutting a workpiece made of stainless steel, coated steel, aluminum or aluminum alloy by the use of a transparent or reflecting optical means for focusing a laser beam and of an assist gas for said laser beam. The optical means is of the multifocus type and is chosen from lenses, mirrors and combinations thereof. The assist gas is oxygen or a nitrogen/oxygen mixture containing at least 90% nitrogen. The method of the invention makes it possible to increase the cutting performance by 40% compared with a conventional laser cutting method.

Figure 1